

US EPA ARCHIVE DOCUMENT

Sustainable Correctional Institutions

*Better meeting mission through
resource conservation*


EPA Compliance Assistance Workshop
April 16, 2009



GEORGIA

DEPARTMENT OF NATURAL RESOURCES
SUSTAINABILITY DIVISION

DNR – hunting licenses & regulators, right?


- 
- DNR mission is broad - includes both natural resource conservation **and** promoting the development of commerce and industry that utilize sound environmental practices.
 - Different divisions charged with using different approaches – EPD is sister division
 - Sustainability Division uses non-regulatory, voluntary approach (f.k.a. P2AD)
 - Working towards a sustainable prosperity for all Georgians – triple bottom line

How we assist Georgia businesses

- Provide guidance, training and tools to help businesses reduce their impacts on natural resources
- Services available to any organization in the state – free and confidential
- Recognize leaders and motivate performance through the Partnership for a Sustainable Georgia



Why should you care about sustainability?

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- Make sure that your grandchildren have clean water to drink, clean air to breathe, health and safety...
 - As resources become more scarce and demand for them increases, violence and your workload increases
 - Managing wastes and using resources inefficiently keeps you from focusing on your mission of ***effectively managing offenders & providing a safe & secure GA***

20th Century Manufacturing



***"So that's
where it all
goes! Well, I'd
like to thank
you fellows
for bringing
this to my
attention."***

21st Century Manufacturing

Toxics = costly liabilities

Waste = product/labor lost

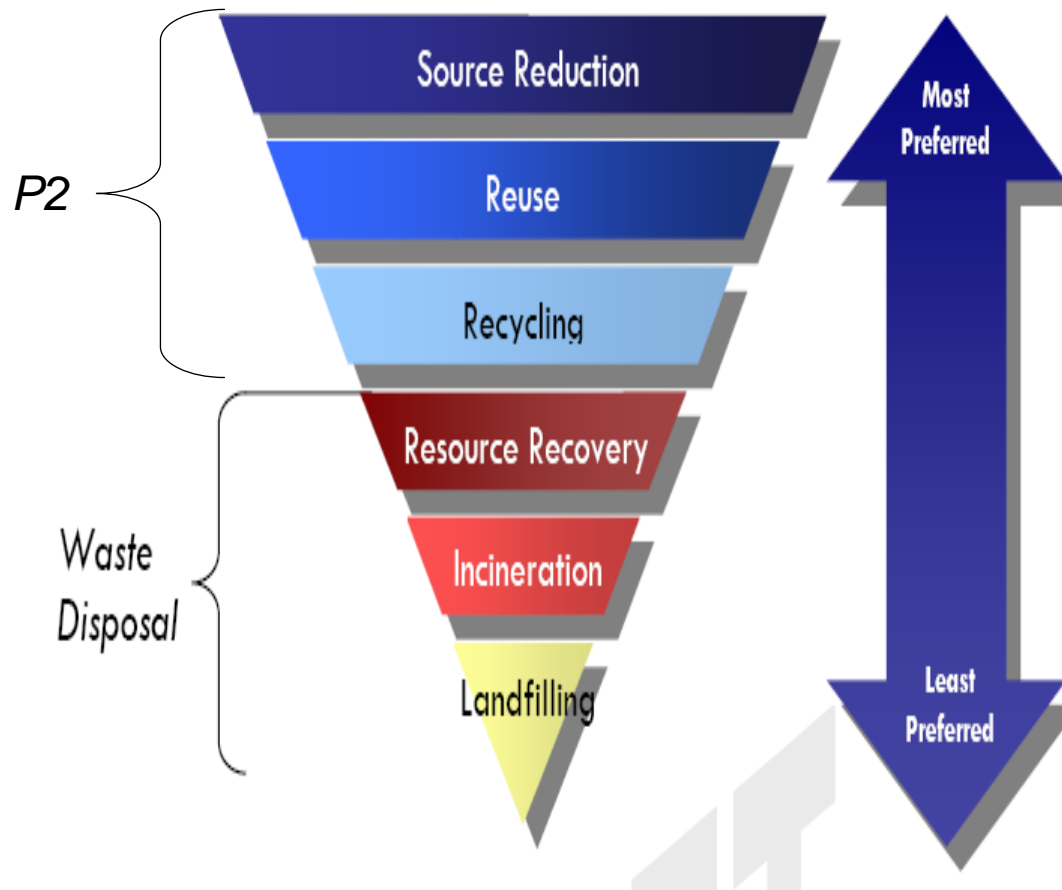
Efficiency = survival

Sustainability = market share





Waste Management Hierarchy

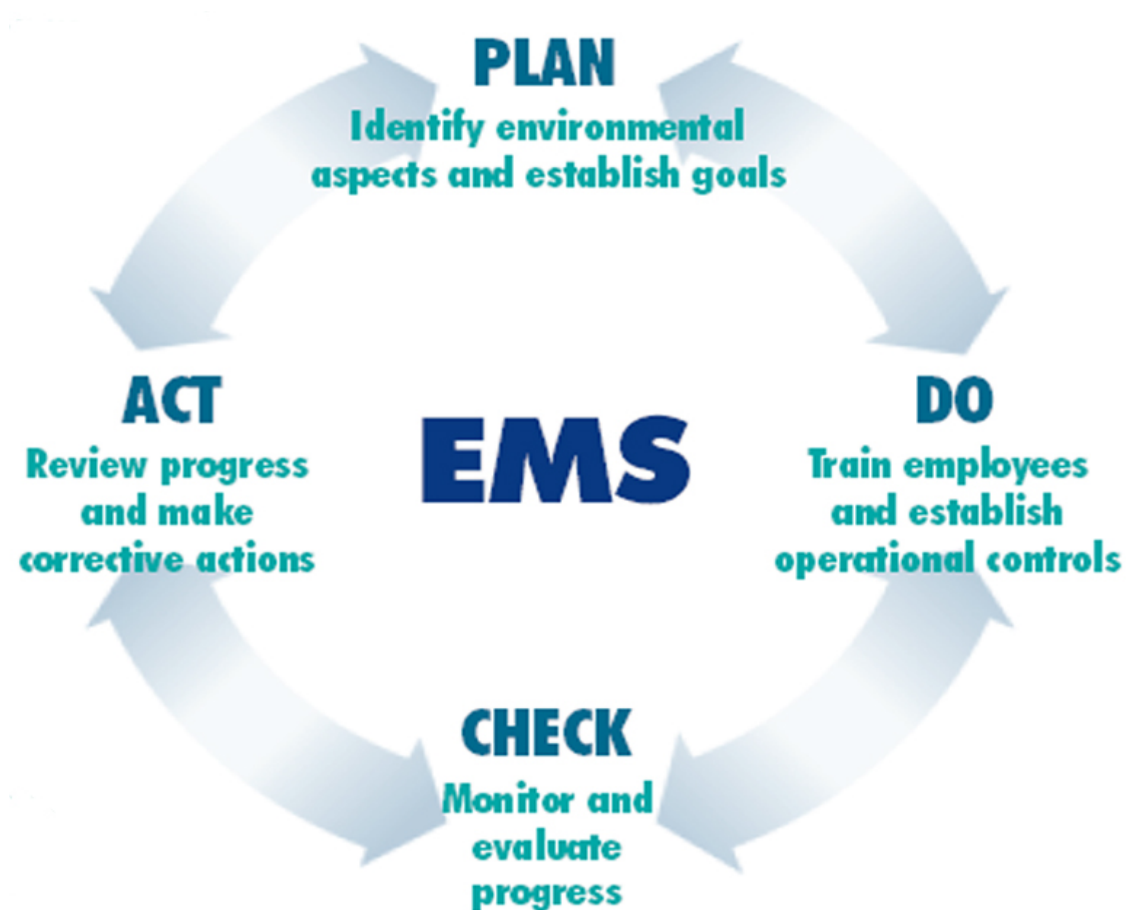


Tools to get operations there

- 
- Pollution Prevention
 - Lean/Six Sigma
 - Environmental Management Systems
 - Life Cycle Assessment
 - Design for Environment
 - Product Stewardship



What is an EMS?





The guidebook walks you through the seven steps for planning, implementing, maintaining and improving your program.

- › **Step One - Gathering Information**
- › **Step Two - Securing Support**
- › **Step Three - Forming the Green Team**
- › **Step Four - Selecting and Planning a Program**
- › **Step Five - Launching the Program**
- › **Step Six - Encouraging Participation**
- › **Step Seven - Monitoring the Program**



There are seven modules, each of which provides specific guidance to implement a specific program.

- › **Module One – Waste Reduction**
- › **Module Two – Environmentally Preferable Purchasing**
- › **Module Three – Energy Conservation**
- › **Module Four – Water Conservation**
- › **Module Five – Alternative Transportation**
- › **Module Six – Green Building**
- › **Module Seven – Corporate Social Responsibility**



These resources will provide additional information and examples to help your efforts.

Guidebook Resources:

- › Sample Environmental Policies
- › Templates for letters & posters
- › Environmental calculators

Module Resources

- › Quick Start Guides
- › Case Studies
- › Websites for More Information

The Sustainable Office Toolkit

The Sustainable Office Toolkit is a set of resources and tools developed by P²AD to help offices of all types and size move toward sustainability through practices such as recycling, energy and water conservation, and "green" building.

To become a sustainable office, your environmental program must become part of your business's core operating principles and values. It must be carried out as systematically and with as much attention to detail as a project for your manager or board of directors. For example, simply posting recycling signs above a new container is not going to effect a change in behavior; and such a change is exactly what needs to happen.

Toolbox

If you find our toolkit to be useful and would like to join other organizations in Georgia working to reduce their environmental footprint, please visit our Partnership for a Sustainable Georgia and learn how you can get recognition and free assistance for your efforts.

Example guidance from Water Module

Basic Steps:

A. **Gather Information**

- Get all water and sewer bills
- Correlate water use with facility operation

B. **Conduct a Comprehensive Facility Audit**

- Find all water using equipment
- Obtain manufacturer's information
- Perform water audit – Measure 80%+

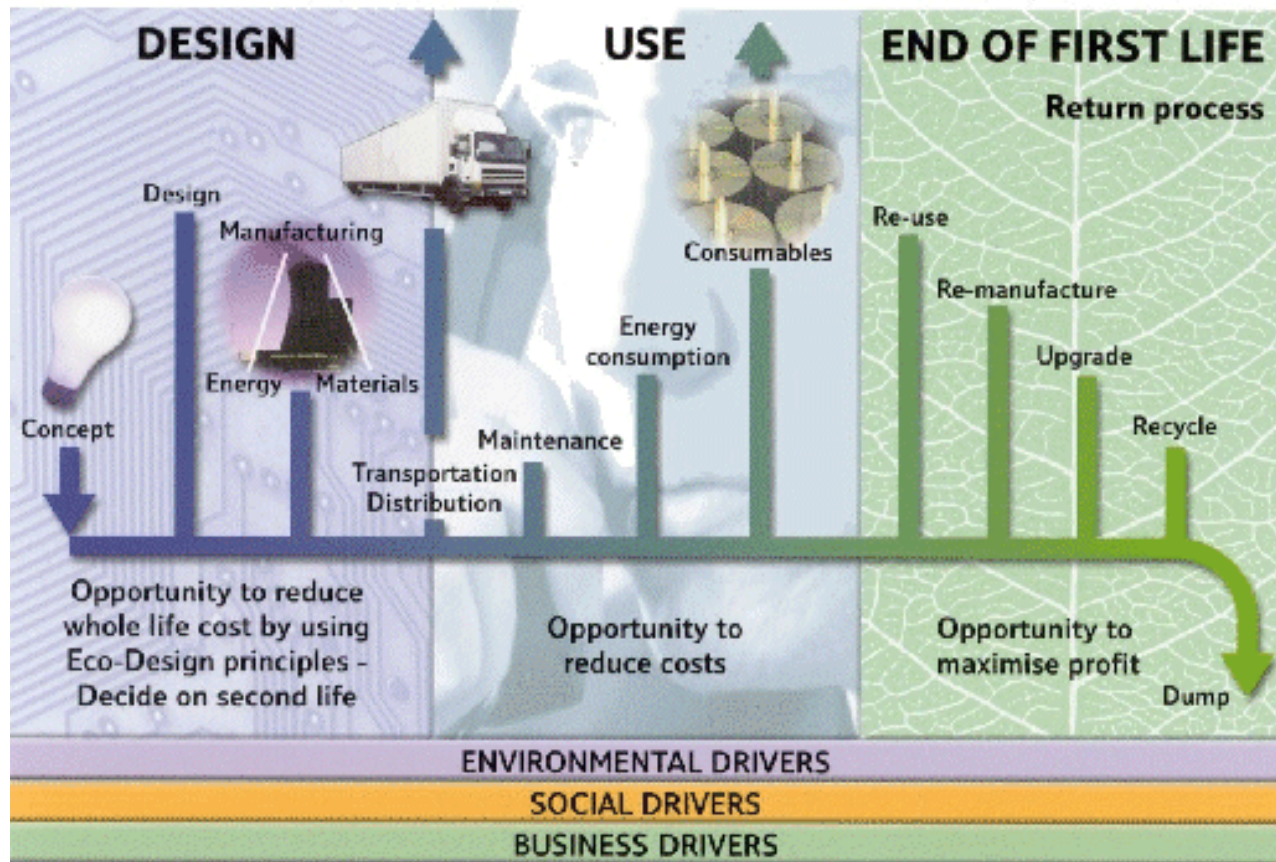
C. **Prepare the Estimated Water Balance**

- Do measurements make sense?
- What accounts for majority of water use?
- Use cost / benefit analysis to prioritize

D. **Develop Water Management Plan**

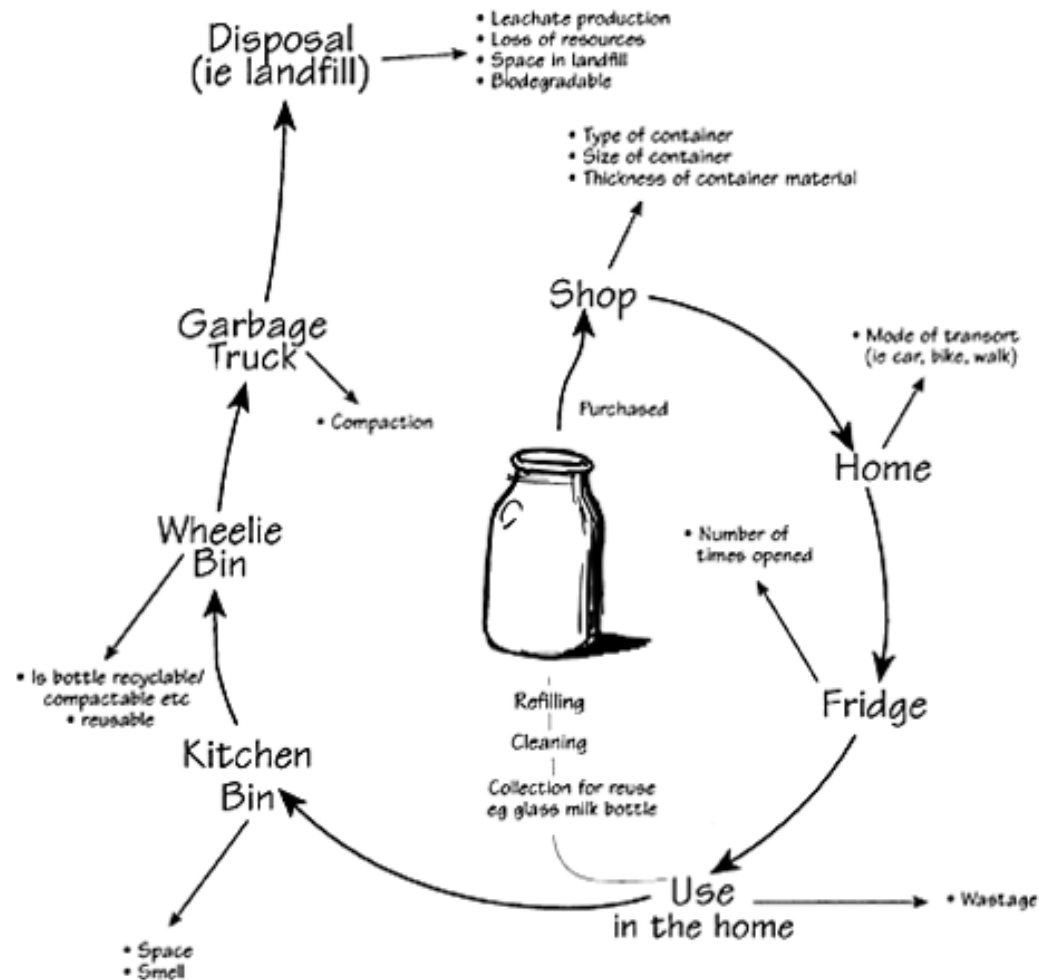
- Integrate with energy and solid waste plans
- Continuous improvement, not “once and done”

Product Stewardship







Life Cycle Analysis



Past P2 Successes with DoC

- 
- P2 assessments of Arrendale, Walker, & Calhoun
 - EMS Pilot with Hancock, Baldwin & Scott
 - Great energy and water savings at all facilities
 - Outstanding food waste composting program
 - Tremendous opportunities with laundries, food service and manufacturing


Sample Energy Savings



	Cost Savings Per year	Implementation Cost	Simple Payback
Arrendale	\$130,000	\$240,000	1.8 yrs
Calhoun	\$63,000	\$144,000	2.3 yrs
Walker	<u>\$24,000</u>	<u>\$54,000</u>	2.2 yrs
Total	\$217,000*	\$438,000	2.0 yrs

*18.5% of total energy costs!

Sample Water Savings




	Cost Savings Per year	Implementation Cost	Simple Payback
Arrendale	\$137,633	\$38,070	< 1.0 yr
Calhoun	\$22,418	\$5,675	< 1.0 yr
Walker	<u>\$48,495</u>	<u>\$16,205</u>	< 1.0 yr
Total	\$208,546*	\$59,950	< 1.0 yr

*24.9% of total water/wastewater costs!

(assumes \$3.50 per 1,000 gallons for Arrendale WW treatment)

Sample Waste Savings



Item	Arrendale	Calhoun	Walker	Total
Composting On-Site	\$19,750			\$19,750
Recycling	\$7,680	\$13,270		\$20,950
Material/ Chemical Use Reduction	\$21,100	\$16,900	\$5,500	\$43,500
Total	\$48,530	\$30,170	\$5,500	\$84,200

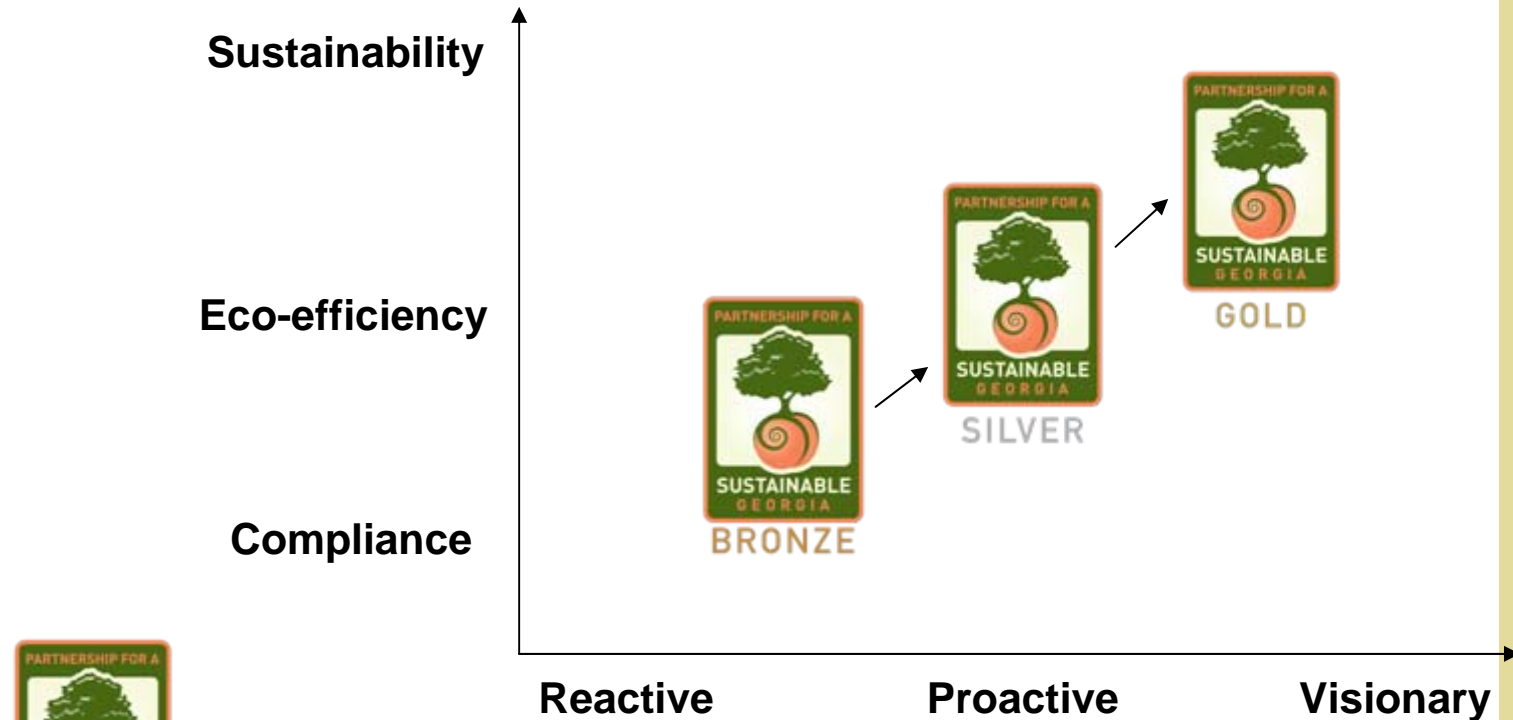
Other waste savings possible: accepting yard waste, tipping fees,
selling compost

Partnership for a Sustainable Georgia

- 180 organizations working to reduce their environmental footprint
- Open to all willing to commit to taking holistic approach, report results annually
- Benefits include free hands-on coaching/assessments/trainings, recognition, networking, mentoring, expedited permitting, priority issue resolution from EPD



Moving towards sustainability



EMS framework with additional
community outreach, supply chain and
mentoring requirements

Questions?

Let us help you!

www.p2ad.org

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